

FUEL-CONTROL MANIFOLD WITH  
BROAD-RANGE TEMPERATURE AND PRESSURE CAPABILITY

ABSTRACT OF THE DISCLOSURE

A fuel-control manifold has a non-integral body with at least three pieces joined together. The fuel-control manifold has a tank port, an engine supply port, a fueling port, and a shutoff valve, all in the upper body segment. The shutoff valve includes a controllable shutoff valve closure having a shutoff-valve first side in fluid flow communication with the tank port and a shutoff-valve second side in fluid flow communication with the engine supply port and with the fueling port. There are a defueling port in a lower body segment, a vent port in the upper body segment, and a defuel/vent valve in a middle body segment. The defuel/vent valve includes a controllable ball-valve defueling closure having a defueling-valve first side in fluid-flow communication with the shutoff-valve second side and a defueling-valve second side in fluid-flow communication with the defueling port, and a controllable ball-valve vent closure having a vent-valve first side in fluid-flow communication with the vent port, and a vent-valve second side in fluid-flow communication with the defueling-valve second side. The defueling closure and the vent closure are mounted on a common defuel/vent valve stem, and the defueling closure and the vent closure cannot be open at the same time.